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United States Department of Agriculture,

BUREAU OF PLANT INDUSTRY,

Tobacco Investigations,

WASHINGTON, D. C.

PLANS FOR THE CONTINUATION OF THE TOBACCO INVESTIGATIONS IN TEXAS.

OUTLINE OF THE WORK.

For several years past the United States Department of Agriculture has been conducting experiments in the growing of cigar tobacco in several counties of eastern Texas, and it has been demonstrated that high-grade domestic filler can be produced from acclimated Cuban seed on the red soils of this section when the proper methods of growing and handling the crop are followed. The industry has centered principally in Anderson and Nacogdoches counties, and for the past two years work has been confined practically to these two counties.

Since the year 1904 experiments in the growing of cigar-wrapper tobacco under artificial shade have been conducted by a few growers in this section, and, at the request of these growers, instructions have been given in the methods of producing this class of tobacco. The Department, however, has never at any time advised the introduction of this phase of the industry into Texas.

At the last annual session of the state legislature an appropriation of \$1,000 per annum for a period of two years was made for the purpose of assisting this Department in conducting experiments in the culture of tobacco in Nacogdoches County, and arrangements have been made by the Bureau of Plant Industry of this Department for conducting a series of experiments with this crop in cooperation with the state agricultural experiment station. For carrying out the experiments a suitable site has been selected near the town of Nacogdoches. The type of soil selected for the purpose is a red sandy loam, which has been found to be best adapted to the growing of tobacco in this section.

There are three principal features of the work as planned: First, a comparative test of different types and strains of Cuban seed as to

both quality and yield; second, a series of fertilizer tests intended to determine the best methods of fertilizing the tobacco and other crops grown in rotation; and, third, experiments to discover the best rotation system to be followed in growing tobacco as a money crop in connection with other crops adapted to this region. The field selected for the experiments covers 5 acres and will be laid off into plots so as to provide for these three features of the work.

VARIETY TESTS.

A portion of the field will be used for testing, side by side, the most promising strains and varieties both as to quality and productiveness. A feature of this work will be a careful test of the merits of the so-called "Big Cuban Hybrid" in comparison with the straight Cuban seed selections. Careful selections will be made each year of the most desirable plants from the best varieties, with a view to their further improvement.

FERTILIZER TESTS.

The portion of the field used for the fertilizer tests will be divided into forty plots, one-fourth of which will be used each year for experiments with tobacco. The remaining plots will be used for similar tests with other crops which are to follow tobacco in rotation. These tests are so arranged as to determine the best system of fertilizing to be followed in producing tobacco of high quality along with other crops and in maintaining and improving the productiveness of the tobacco soils.

CROP-ROTATION EXPERIMENTS.

Experience has shown that it is not desirable to grow tobacco continuously on the same soil, and a series of experiments has therefore been planned for the purpose of devising a practical system of crop rotation to be used in connection with the growing of tobacco on the eastern Texas soils. These experiments will give valuable information as to what crops can precede and follow tobacco to advantage. The matter of the proper rotation system to be followed is an important feature of the successful and profitable production of this Cuban tobacco.

A tract of land located on the farm of Mr. Baker, $1\frac{1}{2}$ miles north of the court-house in Nacogdoches on what is known as North street, has been leased for the purpose of conducting the work. This location is easily accessible, and the farmers of the county are invited and urged to visit the experimental farm from time to time to observe and study the progress of the work. Mr. Otto Olson will have charge of the work and will be pleased to explain the details of the experiments to all interested.

As opportunity permits, Mr. Olson will also visit, from time to time, the farms of tobacco growers in Nacogdoches and other tobacco-producing counties for the purpose of keeping in touch with the industry and giving such advice and instruction to growers as may be necessary.

W. W. GARNER,
Physiologist in Charge.

Approved:

B. T. GALLOWAY,
Chief of Bureau.

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